

Title (en)

Purifier comprising a solids separation device, and method for wastewater purification

Title (de)

Reiniger mit einer Feststofftrennungsvorrichtung und Verfahren zur Abwasserreinigung

Title (fr)

Purificateur comportant un dispositif de séparation des solides et un procédé de purification des eaux usées

Publication

**EP 2404879 A1 20120111 (EN)**

Application

**EP 10168907 A 20100708**

Priority

EP 10168907 A 20100708

Abstract (en)

The invention relates to a purifier (100) for the purification of a fluid such as wastewater, the purifier comprising: - a reaction vessel (10) for a fluid, the reaction vessel having a reaction chamber (11) and a bottom (12); - a downer (14) having a top end (91) and a bottom end (92), wherein the top end of the downer is connected to a fluid collector (13) to collect fluid from the reaction vessel (10), and the downer is arranged to transport the fluid towards the bottom (12) of the reaction vessel; - a solids separation device (20) arranged to separate solids from liquid, the solids separation device comprising a fluid inlet (72) arranged to introduce fluid into the solids separation device and a liquid discharge (56) arranged to remove separated liquid from the solids separation device; wherein the fluid inlet of the solids separation device (20) is connected to the bottom end (92) of the downer and the solids separation device is located on or near the bottom (12) of the reaction vessel.

IPC 8 full level

**C02F 3/12** (2006.01); **C02F 3/28** (2006.01)

CPC (source: EP KR US)

**C02F 3/12** (2013.01 - KR); **C02F 3/1226** (2013.01 - EP US); **C02F 3/28** (2013.01 - KR); **C02F 3/2846** (2013.01 - EP US);  
**Y02W 10/10** (2015.05 - US)

Citation (applicant)

EP 2065344 A1 20090603 - PAQUES BIO SYST BV [NL]

Citation (search report)

[X] EP 0493727 A1 19920708 - PWA INDUSTRIEPAPIER GMBH [DE]

Cited by

CN104470859A; CN104276666A; CN111115949A; EP3613709A1; EP4119508A1; WO2014012817A1; US11613483B2; WO2020038959A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

Designated extension state (EPC)

BA ME RS

DOCDB simple family (publication)

**EP 2404879 A1 20120111**; AU 2011274639 A1 20130124; AU 2011274639 B2 20140313; BR 112013000208 A2 20200714;  
BR 112013000208 B1 20210223; CA 2804257 A1 20120112; CA 2804257 C 20180911; CL 2013000062 A1 20130809;  
CN 103097307 A 20130508; CN 103097307 B 20150805; DK 2590900 T3 20150216; EP 2590900 A1 20130515; EP 2590900 B1 20150128;  
EP 2590900 B8 20150422; ES 2535354 T3 20150508; JP 2013533801 A 20130829; JP 5989643 B2 20160907; KR 102017903 B1 20191021;  
KR 20130050965 A 20130516; MX 2013000137 A 20130318; PL 2590900 T3 20150831; PT 2590900 E 20150507; RU 2013105335 A 20140820;  
RU 2568221 C2 20151110; SI 2590900 T1 20150529; US 2013206684 A1 20130815; US 9102548 B2 20150811; WO 2012005592 A1 20120112;  
ZA 201300120 B 20140625

DOCDB simple family (application)

**EP 10168907 A 20100708**; AU 2011274639 A 20110708; BR 112013000208 A 20110708; CA 2804257 A 20110708;  
CL 2013000062 A 20130108; CN 201180043466 A 20110708; DK 11736188 T 20110708; EP 11736188 A 20110708; ES 11736188 T 20110708;  
JP 2013518300 A 20110708; KR 20137003385 A 20110708; MX 2013000137 A 20110708; NL 2011050500 W 20110708;  
PL 11736188 T 20110708; PT 11736188 T 20110708; RU 2013105335 A 20110708; SI 201130430 T 20110708; US 201113808644 A 20110708;  
ZA 201300120 A 20130104